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1. (Amended) A transmission method of transmitting on a network having at least one switch enabling information to be transmitted on at least one path between a source node and a destination node during a communication session, the network being adapted to transmit data in at least one connected mode and at least one non-connected mode, the session including transmission of at least one packet, each packet including user data and additional data defining notably the path on the network which the user data will follow, said transmission method comprises:

when each packet is received, the destination node performs:

a first reading step, of reading the additional data, and

a determination step, of determining the transmission mode,

connected or non-connected, taking into account at least some of the additional data,

wherein,

the additional data includes a data item representing a virtual channel and a data item representing the source node and, during the determination step, the destination node takes into account the data items representing both the virtual channel and the source node in order to determine the transmission mode, connected or non-connected.

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2. (Amended) A transmission method according to Claim 1, wherein the destination node has a memory in which additional reference data are stored and said determination step includes a comparison step, of comparing the additional reference data and additional data read during the first reading step.

3. (Amended) A transmission method according to Claim 2, wherein, during said determination step, the transmission mode is determined as connected when the read additional data and the additional reference data are identical.

4. (Amended) A transmission method according to Claim 1, wherein, when, during said determination step, it is determined that the transmission mode is non-connected, the method includes a second reading step, of reading, in the first packet containing the information, additional data relating to the information and intended to organize its transmission.

5. (Amended) A transmission method according to Claim 1, wherein, when the transmission mode is connected, the method includes a reservation step, of reserving a virtual channel between the source node and the destination node, said reservation step being effected as a preliminary to transmission of the said information.

6. (Amended) A method of sending by a source node, on a network having at least one switch, enabling information to be transmitted on at least one path between the source node and a destination node during a communication session, the network being adapted to transmit data in at least one connected mode and at least one non-connected mode, the session including transmission of at least one packet, each packet including user data and additional data defining notably the path on the network which the user data will follow, said method comprises:

at each sending of information in the connected mode, the source node performs a reservation step, of reserving a virtual channel between the source node and the destination node, a virtual channel which the information will follow; and

at each sending of a packet of information, in the connected mode, the source node performs a determination step, of determining the additional data, during which the determined additional data represents

a unique identifier of the source node in the network, and
the virtual channel.

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7. (Amended) A reception method of receiving by a destination node, on a network having at least one switch, for receiving information on at least one path coming from a source node during a communication session, the network being adapted to transmit data in at least one connected mode and at least one non-connected mode, the session including the transmission of at least one packet, each packet including user data and additional data defining notably the path on the network which the user data will follow, said reception method comprises:

when each packet is received, it includes:

a first reading step, of reading the additional data,

a determination step, of determining the transmission mode, connected or non-connected, taking into account at least some of the additional data,

wherein,

the additional data includes a data item representing a virtual channel and a data item representing the source node and, during said determination step,

the destination node takes into account the data items representing both the virtual channel and the source node in order to determine the transmission mode, connected or non-connected.

8. (Amended) A reception method according to Claim 7, wherein the destination node has a memory in which additional reference data are stored and said determination step includes a comparison step, of comparing the additional reference data and additional data read during said first reading step.

612 9. (Amended) A reception method according to 8, wherein, during said determination step, the transmission mode is determined as connected when the additional reference data the read additional data are identical.

10. (Amended) A reception method according to Claim 7, wherein, when, during said determination step, it is determined that the transmission mode is non-connected, the method includes a second reading step, of reading, in the first packet containing the information, additional data relating to the information and intended to organize its transmission.

11. (Amended) A reception method according to Claim 7, wherein, when the transmission mode is connected, the method includes a reservation step, of reserving a virtual channel between the source node and the destination node, said reservation step being effected as a preliminary to transmission of the information.

12. (Amended) A transmission system for transmitting on a network having at least one switch enabling information to be transmitted on of least one path between a source node and a destination node during a communication session, the network being adapted to transmit data in at least one connected mode and at least one non-connected mode, the session including the transmission of at least one packet, each packet including user data and additional data defining notably the path on the network which the user data will follow, said transmission system comprises:

processing means of the destination node, adapted, each time a packet is received:

to read the additional data in the packet, and

to determine the transmission mode, connected or non-connected, taking into account at least some of the additional data,

wherein,

the source node has determination means for determining the additional data so that the additional data includes a data item representing a virtual channel, a data item representing the source node and said processing means of the destination node taking into account the data items representing both the virtual channel and the source node in order to determine the transmission mode, connected or non-connected.

13. (Amended) A transmission system according to Claim 12, wherein the destination node has a memory means in which additional reference data are stored and

in that said processing means of the destination node is adapted to compare the additional reference data and the read additional data of the packet.

14. (Amended) A transmission system according to Claim 13, wherein said processing means of the destination node is adapted to determine that the transmission mode is connected when the read additional data and the additional reference data are identical.

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15. (Amended) A transmission system according to Claim 13, wherein, when said processing means of the destination node has determined that the transmission mode is non-connected, to read, in the first packet containing the information, additional data relating to the information and intended to organize its transmission.

16. (Amended) A transmission system according to Claim 13, wherein said processing means of the destination node is adapted to reserve a virtual channel, in cooperation with the source node, and to effect the reservation in order to effect the reception of information in the connected mode.

17. (Amended) A device for sending from a source node, on a network having at least one switch, enabling information to be transmitted on at least one path between the source node and a destination node during a communication session, the network being adapted to transmit data in at least one connected mode and at least one non-connected mode, the session including the transmission of at least one packet, each

packet including user data and additional data defining notably the path on the network which the user data will follow,

said device comprising:

reservation means adapted, on each sending of information in the connected mode, to effect a reservation of a virtual channel between the source node and the destination node, a virtual channel which the information will follow; and

determination means for determining additional data, adapted, each time a packet of the information is sent, in the connected mode, to perform an operation of determining the additional data representing

a unique identifier of the source node in the network, and the virtual channel.

18. (Amended) A reception device of a destination node, on a network having at least one switch, for receiving information on at least one path coming from a source node during a communication session, the network being adapted to transmit data in at least one connected mode and at least one non-connected mode, the session including the transmission of at least one packet, each packet including user data and additional data defining notably the path on the network which the user data will follow, said reception device comprises:

processing means adapted, each time a packet is received:

to read the additional data, and

to determine the transmission mode, connected or non-

connected, taking into account at least some of the additional data,

wherein,

the additional data includes a data item representing a virtual channel, a data item representing the source node and said processing means is adapted to take into account the data items representing both the virtual channel and the source node in order to determine the transmission mode, connected or non-connected.

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19. (Amended) A reception device according to Claim 18, wherein it has a memory means in which additional reference data are stored and said processing means includes comparison means of comparing the additional reference data and the additional data read by said processing means.

20. (Amended) A reception device according to Claim 19, wherein said processing means is adapted to determine that the transmission mode is connected when the additional reference data and the read additional data are identical.

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31. (Amended) A transmission method of transmitting user data on a switched network between a source node having a unique identifier on the network and a destination node, the transmission method comprises:

performed by the source node,

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a first determination step, of determining additional outward data defining notably, in its entirety, the path to be followed on the network by the user data, and

a sending step, of sending, by the source node, at least one packet of user data and additional outward data which relate to it,

wherein,

during said first determination step, the source node defines additional outward data representing the unique identifier of the source node; and

performed by the destination node, on reception of each packet,

a reading step, of reading the identifier in the additional outward data; and

a checking step, of checking correct reception of the user data

and, in the event of correct reception:

a second determination step, of determining additional return data defining notably a path going from the destination node to the node identified by the identifier, and

an acknowledgment step, of acknowledging by sending acknowledgment data indicating correct reception of the user data and of the additional return data,

wherein,

during said first determination step, the source node defines additional outward data representing a virtual channel which the user data must follow, the unique identifier of the source node being placed in addition to the virtual channel, thereby enabling the destination node to identify the virtual channel used by the user data, without any ambiguity.

32. (Amended) A transmission method according to Claim 31, wherein, during said second determination step, the destination node determines additional return data representing the virtual channel which the acknowledgment data must follow.

33. (Amended) A method of sending user data over a switched network used by a source node having a unique identifier on the network for transmitting user data to a destination node, the method comprises:

B13 a determination step, of determining additional outward data defining notably, in its entirety, the path to be followed on the network by the user data, and

a sending step, of sending, by the source node, at least one packet of user data and additional outward data which relate to it,

wherein,

the additional outward data determined during said determination step represents the unique identifier of the source node in addition to the virtual channel which the user data must follow.

34. (Amended) A method according to Claim 33, on reception of a packet in return, coming from the destination node, the packet including acknowledgment information, further comprises:

a read step, of reading a virtual channel identifier represented by the acknowledgment information; and

a comparison step, of comparing the received identifier and the virtual channel identifier used during said sending step.

35. (Amended) A reception method of receiving, by a destination node, user data on a switched network, data coming from a source node having a unique identifier on the network, the method comprises:

on reception of each packet coming from the source node,

a first read step, of reading an identifier in additional outward data transmitted, in the packet, with user data, and

B13 a check step, of checking correct reception of the user data and, in the event of correct reception:

a determination step, of determining additional return data defining notably a path going from the destination node to the node identified by the identifier, and

an acknowledgment step, of acknowledging by sending acknowledgment data indicating the correct reception of the user data and of the additional return data,

wherein:

said method more particularly comprises a second read step, of reading the unique source node identifier, in addition to a virtual channel which the user data must follow.

36. (Amended) A reception method according to Claim 35, wherein, during said determination step, the destination node determines additional return data representing the virtual channel which the acknowledgment data must follow.

37. (Amended) A reception method according to Claim 35, wherein, during said determination step, the destination node incorporates, in the additional return data, a virtual channel identifier represented by additional data received from the source node.

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38. (Amended) A transmission system for transmitting user data on a switched network between a source node having a unique identifier on the network and a destination node, the transmission system comprises:

the source node having,

determination means for determining additional outward data defining notably, in its entirety, the path to be followed on the network by the user data; and

sending means for sending, by the source node, at least one packet of user data and additional outward data which relate to it,

wherein,

said determination means of the source node being adapted to define additional outward data representing the unique identifier of the source node; and

the destination node having,

613

reading means for reading the identifier in the additional outward data of each packet; and
processing means adapted to
check correct reception of the user data and, in the event of correct reception,
determine additional return data defining notably a path going from the [said] destination node to the node identified by the identifier; and
acknowledgment means for sending acknowledgment data indicating the correct reception of the user data and of the additional return data,
wherein,
said determination means is adapted to define additional outward data representing a virtual channel which the user data must follow, the unique identifier of the source node being placed in addition to the virtual channel, thereby enabling the destination node to identify the virtual channel used by the user data without any ambiguity.

39. (Amended) A system according to Claim 38, wherein said determination means is adapted to determine additional return data representing the virtual channel which the acknowledgment data must follow.

40. (Amended) A sending device for sending user data on a switched network, from a source node having a unique identifier on the network, the sending device comprises:

determination means for determining additional outward data defining notably, in its entirety, the path to be followed on the network by the user data, in order to reach a destination node; and

sending means for sending at least one packet of user data and additional outward data which relate to it,

wherein,

said determination means is adapted to define additional outward data representing the unique identifier of the source node, in addition to a virtual channel which the user data must follow.

613 41. (Amended) A sending device according to Claim 40, further includes:

reception means for receiving a packet coming from the destination node, the packet including acknowledgment information;

reading means for reading a virtual channel identifier represented by the acknowledgment information; and

comparison means for comparing the received identifier and the virtual channel identifier used by said sending means.

42. (Amended) [Reception] A reception device of a destination node, for receiving user data on a switched network, data coming from a source node having a unique identifier on the network, said reception device comprises:

613

first reading means for reading an identifier in additional outgoing data transmitted, in a packet with user data;

processing means adapted to

check correct reception of the user data,

to determine additional return data defining notably a path going from the destination node to the node identified by the identifier; and

sending means for sending additional return data and acknowledgment data indicating correct reception of the user data

wherein,

said reception device more particularly includes second reading means for reading the unique source node identifier, in addition to a virtual channel which the user data must follow.

43. (Amended) A reception device according to Claim 42, wherein said determination means is adapted to determine additional return data representing the virtual channel which the acknowledgment data must follow.

44. (Amended) A reception device according to Claim 42, wherein said determination means is adapted to incorporate, in the additional return data, a virtual channel identifier represented by additional data received from the source node.